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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,990	12/10/2001	Mark F. Bocko	176/61060 (2-1144-1026)	3504

7590

09/29/2003

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EXAMINER

BURD, KEVIN MICHAEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/015,990

Applicant(s)

BOCKO ET AL.

Examiner

Kevin M Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-9 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 4-6, 10-12 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action, in response to the amendment filed 7/23/2003, is a final office action.

Response to Amendment

2. The previous objection to the drawings is withdrawn.
3. The drawings were received on 7/23/2003. These drawings are acceptable.
4. The rejections of the claims under 112 2nd paragraph are withdrawn in view of the amendment.

Applicant's arguments filed 7/23/2003 have been fully considered but they are not persuasive. Applicant states "Sonoda does not disclose 'determining a first position of elements of data in an interleaved sequence using a second position of the elements in a source sequence and a number of items to be skipped as stated in claims 1, 7" and 13. However, Sonoda discloses the second position of the elements in a source code comprise the data words in a consecutive order prior to being input to the odd-even separating circuit (column 5, lines 47-53 and figure 3). This consecutive order determines the transmission sequence shown in figure 5. The sequence groups the odd and even data words together as shown in figure 5. Figure 5 shows the first position of elements of data. In addition, Sonoda shows the position is derived from the number of elements to be skipped. In the first part of the transmission, one element is skipped to allow the odd numbered data words to be adjacent. In the second part

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of the transmission, the number of elements to be skipped is also one so even data words can be adjacent.

For these reasons, the rejections of claims 1-3, 7-9 and 13-15 are stated below and included the newly added features to these claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 7-9 and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sonoda et al (US 4,441,184).

Regarding claims 1, 7 and 13, Sonoda discloses a method of interleaving data. Data words are interleaved so that all of the data words will be separated by one or more blocks on the carrier (column 1, lines 37-55). This data is transmitted to a receiver (column 3, lines 1-25). Sonoda discloses the second position of the elements in a source code comprise the data words in a consecutive order prior to being input to the odd-even separating circuit (column 5, lines 47-53 and figure 3). This consecutive order determines the transmission sequence shown in figure 5. The sequence groups the odd and even data words together as shown in figure 5. Figure 5 shows the first position of elements of data. In addition, Sonoda shows the position is derived from the number of

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elements to be skipped. In the first part of the transmission, one element is skipped to allow the odd numbered data words to be adjacent. In the second part of the transmission, the number of elements to be skipped is also one so even data words can be adjacent.

Regarding claims 2, 8 and 14, the interleaved data is received and de-interleaved (column 3, lines 1-25).

Regarding claims 3, 9, 15, the de-interleaved data is interpolated to correct any errors, which may have occurred (column 3, lines 13-20).

Allowable Subject Matter

6. Claims 4-6, 10-12 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory

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period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any response to this final action should be mailed to:

Box AF

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

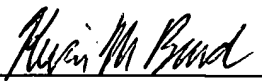
(703) 872-9314, (for formal communications; please mark "EXPEDITED PROCEDURE" or for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Burd, whose telephone number is (703) 308-7034. The Examiner can normally be reached on Monday-Thursday from 9:00 AM - 6:00 PM.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.


MOHAMMAD H. GHAYOUR
PRIMARY EXAMINER


Kevin M. Burd
PATENT EXAMINER
9/23/03